

specification in such a way as to reasonably convey to one skilled in the art that the inventors, at that time the application was filed, had possession of the claimed invention. The Official Action also objected to the specification under § 112 first paragraph as failing to provide a sufficient written description of the subject matter set forth in the rejected claims, and as failing to enable the invention as recited in the rejected claims. The feature at issue was added to independent claims 1 and 44 in the applicant's response to the previous Official Action, and recites, in essence, "enabling ones of the workers to initiate changes to their respective work schedules".

In response, the applicants regret not noting support in the originally filed specification for these added features when filing the applicant's response to the previous Official Action. Nevertheless, the applicants respectfully submit that the originally filed specification sufficiently supports these features, as described in at least the following passages of the originally filed specification:

Page 10, line 20, in the "Overview of the Invention" section, the specification describes "employee generated requests desiring to change or shift their schedules";

Page 25, line 22 through page 26, line 1, in the Detailed Description section, the specification provides that "the request shift trade sub-module 408 provides the software interface for an employee to request a shift trade", which is part of the employee interface module 312, as illustrated in Figure 5;

Page 36, line 3 describes "Step 566 allows a user to post or sign-up for a shift trade"; and

Page 39, line 11 begins a detailed discussion of functionality that dynamically achieves shift trades without intervention of management, i.e. at the initiative of specific employees, continues at least until line 21 of page 39, resumes at page 40, line 1, and continues at least to page 41, line 7. The processing described in these passages is illustrated in Figure 12.

The applicants submit that the cited portions of the originally-filed specification provide sufficient written description for and fully enable all features recited in claim 1 and 44, and therefore request reconsideration and withdrawal of the objections to the specification and the rejection of claims 1-6 and 44-48 under 35 USC § 112, first paragraph.

§ 103 (a) Rejections of Claims 8, 16, 17, 25, 31, and 49 and Related Comments

The applicants include herewith a copy of all claims pending in the case, with respective indications of the current status of each claim. In particular, the applicants have revised independent claims 8, 16, 17, 25, 31, and 49, as indicated by redlines appearing in those claims. The applicant submits that the originally-filed specification supports the claim revisions, for example, at:

page 15, lines 3-10 and page 34, lines 7-12 (generation and storage of schedule data, retrieval of same by employees upon request, and forwarding of same to managers);
page 35, lines 7-11 and Figure 11 (distribution of schedules throughout system); and
page 35, line 16 thru page 36 line 7 (user access to schedules after storage/distribution on system, and steps user can take afterwards).

In addition, the portions of the specification cited above regarding the § 112, first paragraph issues also support the revisions made to the claims under discussion.

The applicant submits that the rejections lodged against the claims citing Castonguay and Green (which appear to be the main references supporting the rejections) should be withdrawn when reconsidered against the claims revised as proposed herein. Castonguay appears to disclose a workforce management tool that enables supervisors to forecast future workloads and to schedule an adequate number of employees to meet those workloads. Further, Castonguay appears to provide a tool used to define schedules before distribution to the end-employee, rather than a tool used to adjust schedules post-distribution, as recited in the applicant's claims 8, 16, 25, 31, and 49. Also, Castonguay teaches use only by "supervisors" or "management", and while it discusses enabling supervisors to play "what if" scenarios with work force scheduling (Castonguay, beginning at column 15, line 59), it does not enable adjusting schedules after the schedules are distributed to the employees, nor does it empower employees or workers to accept post-distribution changes posted by management or to initiate post-distribution changes on their own.

Green, the other main reference, appears to disclose a vacation allocation system whereby employees bid for future vacation time in order of seniority (Green, beginning at column 5, line 60), and whereby the system grants such bids while still satisfying business rules regarding required work force and the like. Green appears to function either standalone or in connection

with a work force management tool 14 (Green, beginning at column 2, line 57 thru column 3, line 5). However, Green appears to provide a tool that is employed before, rather than after, schedules are established and distributed to the employees, and does not appear to disclose or render obvious altering previously-distributed schedule data after concluding its processing, as recited in the amended claims. Instead, the output of the Green system appears to be sent to the work force management tool 14, possibly as input to a scheduling function performed by that tool 14.

Green further discusses altering staffing plan requirements to determine vacation planning schedules (Green, column 4, lines 13-16) and downloading long-term forecast data (Green, column 4, lines 21-33). In light of this teaching, it appears fair to characterize Green as a tool suitable for defining schedules before distributing them to the end-employees, rather than as a tool suitable for enabling management and employees to adjust schedules after distribution to the employees, as contemplated by the applicant's invention.

The applicants also submit that the combination of Castonguay and Green would be improper under §103(a) because to do so would undermine or hinder the express teachings of Castonguay. Regarding the terms "employee" or "worker" as used in the applicants' specification and claims, the applicant notes that the originally-filed specification at least at page 8, line 21 through page 9, line 7 distinguishes "management" from "workers" or "employees", and makes clear the distinction therebetween in terms of authority or permission to access various aspects of the system. In the context of the applicant's specification, "management" generates schedules that specify when the "workers" or "employees" are to work. As noted above, Castonguay appears to provide a tool strictly for use by management, rather than by end-employees. While Castonguay's supervisory personnel may be "employees" in the general sense that they are employed and receive compensation for their employment activities, Castonguay's supervisors do not meet the definition for "employees" or "workers" provided in the cited portion applicant's specification. Combining the teachings of Castonguay and Green to give "employees" or "workers" (as defined by the applicant) access to the management-oriented system described by Castonguay would invite chaos. For example, giving an employee or worker the ability to adjust the parameters illustrated in Figure 8, or to engage in the "what if" scenarios described in Castonguay, could enable each employee to grant himself/herself

unlimited break or lunch time, or otherwise wreak havoc with the schedules defined using Castonguay's system.

In conclusion, the applicants submit that the rejections currently lodged against the rejected claims should be withdrawn when considered against the claims revised as proposed herein. In particular, the revised claims focus on a scheduling system that allows dynamic adjustment of previously-distributed schedules, especially when the adjustment is necessitated after distribution of the schedules because of, for example, changes in anticipated workload to be met by the scheduled workforce, or if personal issues with individual employees preclude them from honoring their assigned work shifts. Thus, management may initiate these post-distribution by posting "sheets," which offer employees the opportunity to drop or pick up shifts (or portions thereof) in response to changes in anticipated workload. Also, employees who cannot honor their pre-assigned scheduled shift (or a portion thereof) can avoid alienating their supervisors by arranging with a fellow employee to pick up that shift. Finally, where other employees are accepting shifts posted by either management or employees, the method ensures that these other employees are qualified to pick up those shifts before granting permission to such other employees.

The applicants submit that this filing is completely responsive to the Official Action mailed on 15 January 2003, and request entry and consideration of this response. Favorable action at the earliest convenience of the office is requested.

Respectfully submitted,

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(previously amended) A system for maintaining and distributing a plurality of respective work schedules generated on behalf of at least one manager supervising a plurality of workers, and for enabling ones of the workers to initiate changes to their respective work schedules, the system comprising at least the following:

- 5 a schedule generator configured to generate data representing the plurality of respective work schedules for the plurality of workers;
- 10 a database in communication with said schedule generator for storing said data; and
- B1 at least one employee interface positioned at at least one location within a work environment, wherein said at least one employee interface is in communication with said schedule generator and is configured to display data representing respective ones of the work schedules to corresponding ones of the workers, and is adapted to enable ones of the workers to initiate changes to their respective work schedules.
- 15 2. The system of Claim 1 wherein said work schedule data comprises data regarding employee work schedules that are not generated around one or more predetermined work shifts.
- 20 3. (previously amended) The system of Claim 1, wherein the employee interface is adapted to enable the workers to initiate changes to their respective work schedules without action by the at least one manager.
- 25 4. (previously amended) The system of Claim 1 further including an attendance module configured to utilize said data representing the work schedules and data regarding which workers are present in the work place to determine worker attendance.
5. The system of Claim 1 further including a remote user interface in communication with said database to facilitate access by a remote user.
6. The system of Claim 1 wherein said employee interface comprises a networked computer having software to facilitate access to said work schedule data.
7. The employee interface of Claim 6 wherein said employee interface further includes a printer.

8. (amended herein) A system to distribute a work schedule to a work force of employees and thereafter allow for modifications to said work schedule to be initiated by respective ones of the employees after distribution of the work schedule to the employees, the system comprising at least the following:
- 5 at least one data storage device to store schedule data corresponding to the work schedule;
- at least one computing device in communication with said at least one data storage device to organize, oversee distribution, and modify said schedule data; and
- at least one kiosk located remotely from said computing device, said at least one kiosk and in communication with said computing device to provide an interface for an worker employee to view their work schedule or propose initiate changes to their work schedule.
9. The system of Claim 8 wherein said at least one kiosk includes a display and user interface software.
10. The system of Claim 8 further including an overhead display monitor in communication with said computing device to display schedule information to a plurality of workers.
15. The system of Claim 8 further including an interface with an activity monitoring device in communication with said computing device to determine the presence of a worker at a place of work.
20. The system of Claim 8 further including an interface with an activity monitoring device in communication with said computing device to monitor the activity of a worker at a place of work.
25. The system of Claim 11 wherein said monitoring device comprises an electronic time clock.
14. The system of Claim 8 wherein said kiosk comprises a networked computer having software/configured to provide an employee interface.

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15. The system of Claim 8 wherein said data storage device comprises a hard disk drive.
16. (amended herein) A method for distributing a work schedule to employees and thereafter enabling the employees to at least initiate at least one modification to the modifying a work schedule, the method comprising at least the following:
 - 5 storing work schedule data representing the previously distributed work schedule in a database, wherein said work schedule data defines the work schedules of a plurality of employees;
 - providing employee access to said work schedules at one or more terminals located at one or more locations within a place of business;
 - 10 creating opportunities for at least a first one of the employees to modify at least initiate at least one modification of their own respective work schedule by posting at least a portion of their work schedule for acceptance by at least a second one of the employees; and
 - 15 transmitting said opportunities to said one or more terminals wherein at said one or more terminals at least the second one of the employees may access their own respective work schedule to sign-up for accept at least the portion of the previously distributed work schedule posted by the first one of the employees, thereby enabling both the first one and the second one of the employees said opportunities to modify their own respective work schedules.
- 20 17. (amended herein) The method of Claim 16, further comprising evaluating whether the second one of the employees is qualified to accept the portion of the work schedule posted by the first one of the employees wherein said modify their work schedule comprises signing up to work additional hours or signing up to work fewer hours.

18. The method of Claim 16 wherein said creating opportunities comprises generating sheets and displaying said sheets on at least one of an overhead display or at least one of a terminal.

19. The method of Claim 16 further including the steps of;

5 establishing a pool to which employees may post shifts that are available for trade;

allowing employees to post shifts to said pool;

61 allowing employees to accept shifts from said pool; and

modifying said employee work schedules based on said posting to said

10 pool and said acceptance of shifts from said pool.

20. The method of Claim 19 wherein said pool comprises a listing stored on said database of proposed shift changes posted by employees.

21. The method of Claim 19 further including displaying said shifts posted to said pool on a display for viewing by a plurality of employees.

15 22. The method of Claim 16 wherein said one or more terminals comprise one or more overhead display monitors and one or more kiosks.

23. The method of Claim 16 further including the steps of:

modifying said employee schedules in response to an employee signing-

up for said opportunities for employees to modify their work schedule; and

20 storing said modified schedules in said database.

24. The method of Claim 18, wherein said terminal comprises a kiosk.

25. (amended herein) A method for modifying a schedule to account for changes in workload occurring after the schedule has been distributed to employees, the method comprising at least the following:

creating a sheet having one or more slots for a work shift, each of the slots corresponding to an offer to adjust, after the schedule has been distributed to the employees, a number of employees specified by the schedule to work during the work shift;

5 transmitting said sheet for viewing by a plurality of employees who may accept the offer so as to adjust the number of employees scheduled to work during the work shift;

B1 monitoring for a sign-up to a slot on said sheet by a signing-up employee accepting the offer; and

10 upon detecting a sign-up to said sheet:-

accepting said sign-up onto said sheet;

modifying said sheet to reflect said sign-up;

modifying said signing-up employee's schedule to reflect said sign-up.

26. The method of Claim 25 wherein creating a sheet comprises using a computer to create a

15 sign-up page having one or more sign-up slots to increase or decrease the number of workers scheduled to work during a particular period.

27. The method of Claim 25 wherein said sign-up comprises an employee signing up on a slot to either work said work shift on the sheet or take off the particular work shift on the sheet.

20 28. The method of Claim 25 wherein transmitting further comprises showing said sheet to only employees qualified to work said work shift listed on said sheet.

29. The method of Claim 25 further including closing said sheet if all of said one or more slots are filled due to sign-ups.

30. The method of Claim 25 wherein posting comprises displaying said sheet on at least one over head display or making said sheet available via an employee interface.

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31. (amended herein) A method for employees to at least initiate at least one change to their work schedule after distribution of the work schedule to the employees using a scheduling system, the method comprising at least the following:

creating a proposed shift trade after distribution of the work schedule, in

5 which proposed shift trade a first one of the employees offers at least a portion of a work shift to which the first one of the employees is assigned by the work schedule, said proposed shift trade including at least posting employee shift information regarding shift hours and shift date;

10 ^{b1} posting said proposed shift trade to a shift pool, said shift pool configured to accept responses to said posting from other employees;

displaying said shift pool to a plurality of other employees;
 monitoring said shift pool for a response from at least one responding second employee to accept said proposed shift trade; and

whereby upon receiving said response, said method:

15 accepts said response by evaluating whether the at least second employee is qualified to work the portion of the shift offered by the first one of the employees;

updates the work schedules of said posting first one of the employees and said responding second one of the employees employee; and

20 removes said proposed shift trade from said shift pool.

32. The method of Claim 31 wherein said shift pool comprises a listing of proposed shift trades that can be viewed by employees seeking to modify their schedule.
33. The method of Claim 31 wherein said posting allows other employees to view and sign-up for said proposed shift trade.

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- 4.53-41. (previously cancelled) A method for scheduling a plurality of employees comprising:
- for a first employee, assigning at least one shift start time and at least one shift stop time for each of one or more work days based on the particular needs of the employer or the desires of the employee;
- 5 for a second employee, assigning at least one shift start time and at least one shift stop time for each of one or more work days based on the particular needs of the employer or the desires of the employee; and
- for a plurality of other employees, assigning at least one shift start time and at least one shift stop time for each of one or more work days based on the particular needs of the employer or the desires of the employee;
- B1 10 wherein said start times and stop times for said first, said second and said plurality of other employees are not confined to predefined work shifts.

4.54-42. (previously cancelled) The method of Claim 41 wherein said predefined work shifts comprises division of the day into three 8-hour shifts.

- 4.55-43. (previously cancelled) The method of Claim 41 wherein said predefined work shifts start and stop at generally the same time.
44. (previously amended) A scheduling apparatus for creating and displaying a work schedule comprising:

means for creating a schedule for each of a plurality of employees;

20 means for storing said schedule as schedule data;

means for allowing said employees to view said schedule data at a remote location;

means for retrieving said schedule data from said means for storing;

means for displaying said schedule data to at least one of said employees
at said remote location; and
means for enabling ones of said employees to propose changes to their
respective schedule data.

- 5 45. The scheduling apparatus of Claim 44, further including means for printing said schedule
upon request of one of said employees.
46. The scheduling apparatus of Claim 44 further including means for posting one or more
sheets for display to said employees whereby said one or more sheets comprise a request
to employees to optionally sign-up for increased or decreased work hours as specified on
10 said one or more sheets.
- B1 47. The scheduling apparatus of Claim 44 further including means for posting employee
initiated shift trade requests for viewing and sign-up by said one or more employees.
48. The scheduling apparatus of Claim 44 further including means for comparing schedule
data regarding employees that are scheduled to be working and worker status data
15 regarding employees that are actually at work to determine which employees are
scheduled but not working.
49. (amended herein) A computer program product comprising a computer usable medium
having computer program logic recorded thereon for providing an automated employee
schedule distribution system for use by an entity to distribute employee schedules and to
20 thereafter to assist in the modification of employee schedules after distribution of the
schedules to the employees and in response to changes in anticipated workload occurring
after distribution of the employee schedules to the employees, said computer usable
medium comprising at least the following:
 computer program code logic configured to store schedule data on a
25 storage medium, wherein said schedule data comprises the work schedules of a
plurality of employees;

- computer program code logic configured to monitor for requests for said employee schedules data from employees at employee interfaces;
- computer program code logic configured to transmit said employee schedules data to said employee interface;
- 5 computer program code logic configured to allow for establishment of at least one sheet containing respective slots for employees to sign-up for additional or reduced hours, each of the slots corresponding to an offer to adjust a number of employees specified by the previously distributed schedule to work during the work shift;
- 10 computer program code logic configured to display said at least one sheet to at least one employee; and
- B1 computer program code logic configured to accept employee sign-up to said at least one sheet.
50. The computer program product of Claim 49 wherein said storage medium comprises a hard disk drive.
- 15 51. The computer program product of Claim 49 further including computer program code logic configured to allow a posting employee to post proposed shift trades to a shift pool.
52. The computer program product of Claim 51 further including computer program code logic configured to display said shift pool so that employees other than posting employees can view said proposed shift trades and sign-up to work shifts in said shift pool of proposed shift trades.
- 20